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INVENTION DISCLOSURE

Type in Duplicate - Send Original
and Copy to Patent Department, Bridgewater
Send Additional Copy to C. Iovine, Bridgewater

The following invention is submitted for patent consideration:

TITLE: LOW CALORIE BULKING AGENTS

1. SUMMARY OF IDEA: PURPOSE AND DESCRIPTION OF INVENTION:

This invention covers the production of bulking agents for the high level replacement of sucrose in food systems containing a high percentage of sucrose. The bulking agent products are low-caloric in nature and provide the functional properties of sucrose, excepting sweetness. They are prepared by enzymatically depolymerizing non-cellulosic or non-starch heteropolysaccharides to a degree that permits the polysaccharide to function like sucrose while retaining the low digestibility of the base.

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2. HOW DOES THIS DIFFER FROM, AND WHAT ARE ITS ADVANTAGES OVER WHAT HAS BEEN DONE BEFORE. EXACTLY WHAT PART OF THIS PRODUCT OR PROCESS IS NOVEL AND "UNEXPECTED"?

Our approach is to utilize readily available bases (e.g., guar and tamarind) that contain a high percentage of dietary fiber. Because of the low digestibility of dietary fiber, there has been much interest in using these as low calorie bulking agents. However, these bases in the unmodified state provide undesirable properties, such as increased water binding, viscosity, etc., that limit the useful usage levels; an example would be guar gum which is generally not used in levels higher than 2%.

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3. (a) HAVE YOU SEARCHED THE LITERATURE, INCLUDING PATENTS AND JOURNALS, MANUFACTURERS' BULLETINS OR OTHER AVAILABLE LITERATURE? * YES NO

WHAT TIME PERIOD DOES THE SEARCH COVER? 1971 - Present.

WHAT DATA BASE(S) WERE SEARCHED? CA / US World Patents.

(b) WHAT DID YOUR SEARCH REVEAL THAT MIGHT POSSIBLY BE CONSIDERED TO ANTICIPATE YOUR IDEA?

The literature search showed no indication of the use of enzymes to produce a bulking agent from heteropolysaccharides.

(c) THE PATENT OFFICE NOW PLACES AN OBLIGATION ON THE INVENTOR(S) TO CITE PERTINENT REFERENCES. WHAT DO YOU CONSIDER TO BE THE CLOSEST PRIOR ART? DESCRIBE DIFFERENCES IN YOUR INVENTION COMPARING CLOSEST PRIOR ART.

The nearest prior art to this invention is European Patent Application #0 251 798 filed 02.07.87. It details a process in which a beta-glucan source (e.g., barley) is treated with amylases to remove the soluble starches then beta-glucanases to prepare beta-glucans having a DP of 3-4.

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* The invention disclosure will not be reviewed by the patent review committee unless a prior art search has been conducted.

4. ESTIMATE OF SALES POTENTIAL OF NEW PRODUCT OR PROCESS: WHAT IS LIKELY TO BE ITS MAIN FIELD OF USE?
5. IF THE IDEA RESULTS IN A PATENT, HOW WOULD WE DETECT INFRINGEMENT?
6. ON WHAT DATE WAS THE INVENTION FIRST CONCEIVED? INDICATE NOTEBOOK ENTRY OR OTHER WRITTEN RECORD AND ATTACH PHOTOCOPY OF DOCUMENT.
7. ON WHAT DATE WAS THE PROCESS FIRST PERFORMED OR THE PRODUCT FIRST PRODUCED?
8. IF THE PRODUCT OF THE INVENTION HAS BEEN SOLD, OFFERED FOR SALE, OR THE PROCESS USED COMMERCIALY, STATE WHEN AND WHERE. IF THE PRODUCT OF THE INVENTION HAS BEEN SAMPLED FOR EVALUATION, STATE WHEN AND WHERE.

9. REMARKS:

Signature of Inventor/s:
(PLEASE PRINT OR TYPE
NAME UNDER SIGNATURE)

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Read and Understood by (Witness)

Date: _____, 19__